FEDOROV, B.P.

Diagnosis of pulmonary suppurations under polyclinical conditions. Khirurgiia no.1:115-119 '62. (MIRA 15:11)

1. Iz kliniki obshchey khirurgii lechebnogo fakul'teta (zav. - prof. V.I. Struchkov) I Moskovskogo ordena Lenina meditsinskogo instituta imeni I.M. Sechenova.
(LUNGS--DISEASES)

STRUCHKOV, V.I., prof.; FEDOROV, B.P. (Moskva)

Errors in acute appendicitis. Khirurgiia 40 no.2:65-72 F '64.
(MIRA 17:7)

STROGANOV, V.I., prof.; FEDOROV, B.P.; VOL'-EPSHTEYN, G.L. (Moskva)

Nontuberculous spontaneous pneumothrax. Sov. med. 28 no.3:10-15 Mr '65. (MIRA 18:10)

STRUCHKOV, V.I., prof.; FEDOROV, B.P.; MEDVETSKAYA, L.M.

Some problems of the diagnosis and treatment of acute pulmonary abscesses. Sov. med. 28 no.9:3-9 S '65. (MIRA 18:9)

1. Klinika obshchey khirurgii lechebnogo fakul'teta I Moskovskogo meditsinskogo instituta imeni Sechenova i bol'nitsy No.23 imeni "Medsantrud".

KUZNETSOV, G.K.; TARUNIN, Yu.N.; FEDOROV, B.P.

Power testing of the TG-135-L tow shaker. Izv. vys. ucheb. zav.; tekh. tekst. prom. no.6:18-21 '64. (MIRA 18:3)

1. Kostromskoy tekhnologicheskiy institut.

[illegible], A.I.; [illegible]RUCHKINA, G.I.; GOL'DFARB, Ya.L.

Syntheses of the derivatives of N-substituted dithiocarbamic acids of the thiophene series. Zhur. org. khim. 1 no.4: [illegible]-767 Ap '65. (MIRA 18:11)

USHAKOV, V.A., kandidat tekhnicheskikh nauk; KARAGODIN, V.A. inzhener; MORO, A.I., inzhener; KHAZANOV, B.E., inzhener; FEDOROV, B.S., inzhener; MALITSKIY, S.I., inzhener.

Design and building of large size storm sewers. Gor.khoz. Mosk. 27 no.6: 26-30 Je '53. (MLRA 6:6)

(Moscow--Drainage)

15-57-3-3740

Translation from: Referativnyy zhurnal, Geologiya, 1957, Nr 3, p 181 (USSR)

AUTHOR: Fedorov, B. S.

TITLE: An Experiment on the Practical Application of a Method of Electrical Drainage of Clay Soils (Opyt prakticheskogo primeneniya sposoba elektroosusheniya glinistykh gruntov)

PERIODICAL: Tr. n.-i. in-ta osnovaniy i fundamentov, 1954, Nr 23, pp 13-21

ABSTRACT: During the construction of trenches 9 m deep and 4.7 m wide--to be used for lining of reinforced concrete collectors--water-saturated unstable ground that passed into a state of liquefaction was exposed. By using electrical drainage in combination with suction pumps, the moisture of the sandy loam was lowered from 32.8 to 17 percent. The ground water level was lowered 4.5 m and the sandy loam was changed from running ground to firm ground. During pumping the sandy filter material

Card 1/3

An Experiment on the Practical Application (Cont.)

of the fine filters and the filters themselves were silted up. Cataphoresis during the use of direct current prevents silting, and the water pumped out is perfectly transparent. Not a trace of clay particles was found within the filter. During the opening up of a trench in the Vladimir region, running ground developed because of the effect of hydrodynamic pressures. The trench, which needed to be dried, was 21 by 8.5 m and 3 m below the water table. The bottom of the trench consisted of very sludgy, fine sandy clay. It was suggested that a filtering apparatus with a suction pump be used. After 15 days of effort, the ground water level had been lowered 2.5 m. Electrical drainage was used for further lowering. This additional lowering of the water table by using direct electric current amounted to 1.3 m. The current density in the zone between the electrodes was one amp/m^2. Laboratory experiments have shown that an increase in current density to 5 amp/m^2 has a considerable effect on lowering the water. The experiments have also shown that if the water contains calcium it is more economical to use pumps of the ZK-6 type in combination with

FEDOROV, B.S.

Experience in electric drying of clayey soils during excavation work. NIIOSP no.31:4-11 '57. (MIRA 10:12)
(Soil stabilization)

ANATOL'YEVSKIY, Pavel Aramovich; GANICHEV, Ivan Aleksandrovich; SHEYEROV, Osip Markovich. Prinimal uchastiye: PEN'KOV, A.I.; FAYERMAN, N.B.; KULICHIKHIN, N.I., doktor tekhn. nauk, prof., zasl. deyatel' nauki i tekhniki RSFSR, retsenzent; FEDOROV, B.S., inzh., nauchnyy red.; FRIDKIN, L.M., tekhn. red.

[Drilling technology in building power installations] Tekhnologiia bureniia v energeticheskom stroitel'stve. Pod obshchei red. I.A.Ganicheva. Moskva, Gosenergoizdat, 1962. 407 p. (MIRA 16:5)

(Boring)

SOLODKO, A.P., inzh.; FEDOROV, B.S.

Results of the All-Union voluntary inspection of the quality of construction and the competition for the best building erected according to standard designs. Prom.stroi. 41 no.3:41-44 Mr '64. (MIRA 17:3)

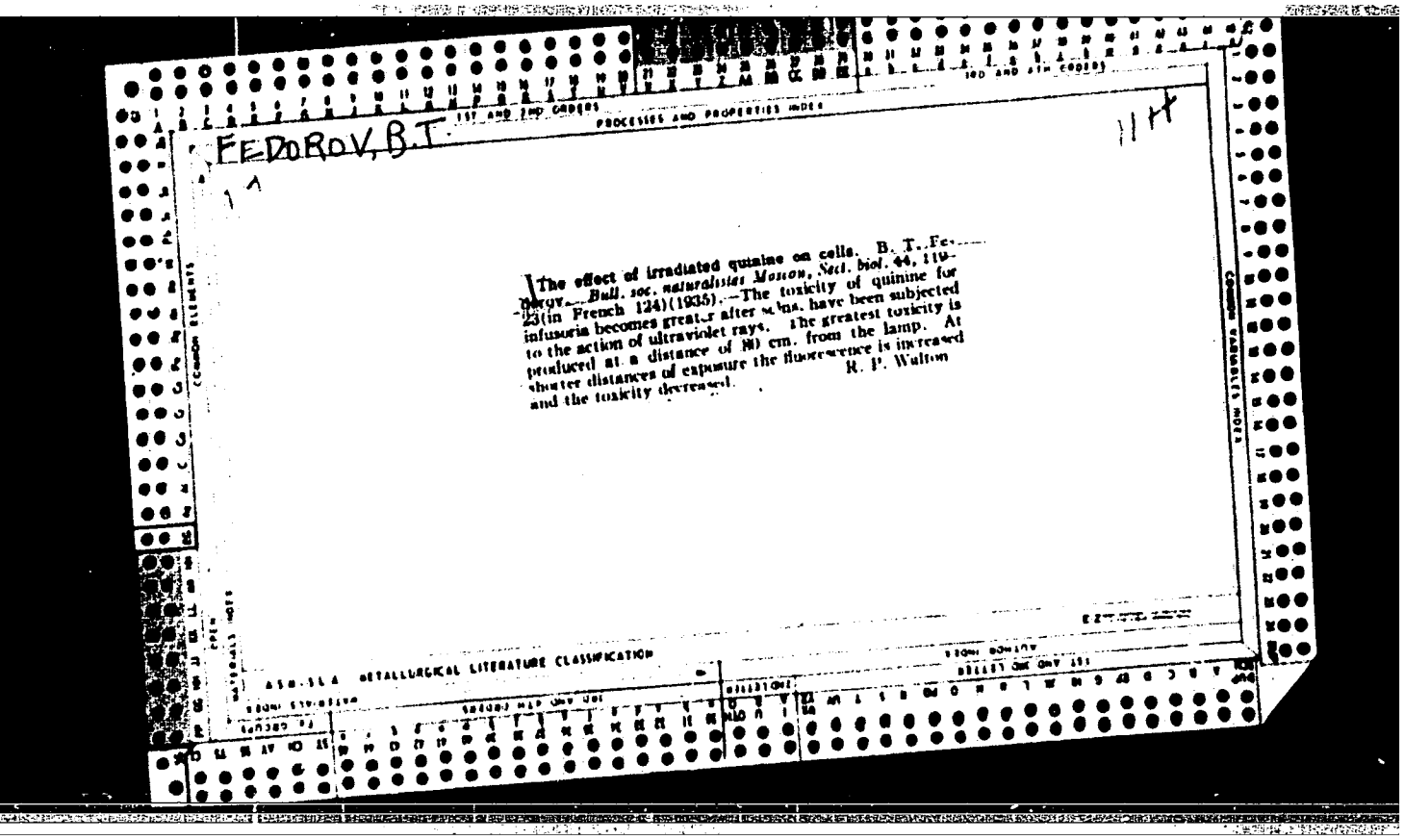
GAVRILKO, V.M., doktor tekhn. nauk; FEDOROV, B.S., inzh.

Use of porous ceramic filters. Energ. stroi. no.33:47-52 '63. (MIRA 17:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut vodosnabzheniya, kanalizatsii, gidrotekhnicheskikh sooruzheniy i inzhenernoy gidrogeologii (for Gavrilko). 2. Gosudarstvennyy vsesoyuznyy trest po ukrepleniyu osnovaniy i sooruzheniy Ministerstva elektrostantsiy SSSR (for Fedorov).

SMIRNOV, Yu.S., inzh.; ROGACHEVSKIY, L.I.; FEDOROV, B.S.

System for driving piles on the construction site of the Krivorog State Regional Electric Power Plant No.2. Energ. stroi. no.41:15-23 '64. (MIRA 17:11)



The effect of irradiated quinine on cells. B. T. Fe-
dorov. *Bull. soc. naturalistes Moscou, Sect. biol.* 44, 119-
23(in French 124)(1935).—The toxicity of quinine for
infusoria becomes greater after solns. have been subjected
to the action of ultraviolet rays. The greatest toxicity is
produced at a distance of 30 cm. from the lamp. At
shorter distances of exposure the fluorescence is increased
and the toxicity decreased. R. P. Walton

FEDOROV, B.T.

Fedorov, B.T. "The results of the work of the expedition of the Institute for Epidemiology, Microbiology, and Infectious Diseases of the Academy of Medical Sciences, USSR, in 1947", Vestnik Akad. med. nauk SSSR, 194[illegible], No. 6, p. 50-52.

SO: U-3042, 11 March 53, (Letopis 'zhurnal 'nykh Statey No. 7, 1949)

USSR/Diseases of Farm Animals. Non-Contagious Diseases. R-2

Abs Jour : Ref Zhur-Biol., No 18, 1958, 83583

Author : Fedorov, B. T.; Mirolyubov, I.I.; Polivanskaya, K. D.; Dorokhova, A. K.

Institute : No institute is given

Title : Steatitis Disease in Minks.

Orig Pub : Karakulevodstvo i zverovodstvo, 1957, No 6, 54-56

Abstract : At one of the sovkhozes for animal breeding, an outbreak of polyavitaminosic steatitis ("yellow fat" disease) occurred among young minks. The disease was characterized by a general depression, by food refusal, by diarrhea with yellow or dark-green feces, sometimes by seizures accompanied by spasms or paralyses. An autopsy of succumbed animals uncovered a well advanced degenerative adiposity. The disease was caused by continuous feedings of fish remnants containing rancid fat to the animals.

Card 1/1

S/200/62/000/011/004/008
D243/D307

AUTHORS: Brekhman, I. I., Bykhovtsova, T. L., Ratimov, B. N., Suprunov, N. I. and Fedorov, B. T.

TITLE: The first results of trials of preparations of the spiny Eleutherococcus in fur farming, poultry farming and bee-keeping

PERIODICAL: Akademiya nauk SSSR. Sibirskoye otdeleniye. Izvestiya, no. 11, 1962, 123-128

TEXT: The present work extended the authors' previous investigations on the effects of Eleutherococcus. 200 minks, aged 4 months on September 3, 1961, received 1 ml/kg of fluid extract of Eleutherococcus root daily with milk. At death (November 28, 1961) their average weight exceeded that of controls by 92 g (8.1%) for males, and 57 g (7.1%) for females. Three treated animals died, as compared with 13 controls. Of the 123 animals treated, 57.4% had large pelts, 31.4% average and 23.2% small: control figures were 48%, 28.8% and 23.2% respectively. Pelt value increased by

Card 1/3

The first results of ...

5.3%. Liver and muscle glycogen, serum albumen and percent globulin rose and the albumen-globulin ratio fell from 1.55 to 1.40. In animals with 'wetting' disease, daily administration of 1 ml/kg Eleutherococcus root rapidly improved appetite and general condition and dried the affected parts of the pelt. Full recovery was reached after 3 - 5 days. The health and survival of incubator chicks was much improved after treatment with 1% solution of Eleutherococcus leaf extract. 0.5 to 2% solutions greatly increased appetite, mobility and activity, and led to earlier plumage and, in cocks, to earlier comb growth. 1 ml/kg Eleutherococcus root extract with the feed increased the weight of experimental birds, whose egg-laying capacity was also less affected by cold weather, being 2.2 times that of controls. Egg-laying began one month earlier and was more regular. The difference in the number of eggs during the experiment was 17.2% and the average weight of an egg increased by 13.5%. Bees given 0.5 - 2% solutions of Eleutherococcus root extract in sugar syrup developed faster, were more active, flew abroad earlier, flew in bad weather, and finished flying later, these effects increasing with concentration. Honey production was increased by 60% by giving a 2% extract of Eleutherococcus root and by 19% by a similar dose of leaf extract for 20 days. There are 2 figures and 2 tables.

ACCESSION NR: AR4036254 S/0137/64/000/003/I005/I005

SOURCE: Referativnyy zhurnal. Metallurgiya, Abs. 3I28

AUTHOR: Nadol'skiy, A. P.; Slavnin, G. P.; Fedorov, B. T.; Kidyarov, B. I.

TITLE: Preparation of quality-standardized titanium concentrates from titanium ores of low concentrating capacity

CITED SOURCE: Tr. Irkutskogo politekhn. in-ta, vyp. 18, 1963, 156-159

TOPIC TAGS: Titanium concentrate preparation, ilmenite, zircon, rutile, siderite, titanium ore dressing, titanium dioxide extraction

TRANSLATION: The possibility of obtaining a Ti concentrate by using gravity concentration and electromagnetic separation was investigated. The mineralogical composition of the sample was (in %): ilmenite 0.5, zircon 0.01, rutile 0.02, etc. Ilmenite concentrates in fine clay classes. The technological process recommended includes the soaking and desliming of Ti-containing clays with a high siderite content, concentration on a table and electromagnetic separation of sands, acid leach-

Card 1/2

ACCESSION NR: AR4036254

ing of the magnetic fraction for the purpose of dissolving siderite, and magnetic separation of the solid products of hydrometallurgical processing. Quality-standardized Ti concentrates containing 26.6% TiO_2 were thus obtained. A. Shmaleva.

DATE ACQ: 17Apr64 SUB CODE: ML ENCL: 00

Card 2/2

NADOL'SKIY, A.P.; SLAVNIN, G.P.; FEDOROV, B.T.; KIDYAROV, B.I.

Obtaining conditioned titanium concentrates from hard-to-concentrate titanium ores. Trudy IPI no.18:156-159 '63.
(MIRA 17:6)

FEDOROV, B.T.

Certain indices and electrode processes during the deposition of copper from sulfate and chloride solutions. Trudy IPI no.18:79-91 '63. (MIRA 17:6)

BREKHMAN, I.I.; BYKHOVTSOVA, T.L.; RATIMOV, B.N.; SUPRUNOV, N.I.; FEDOROV, B.T.

First results of testing preparations derived from Eleutherococcus senticosus in fur farming, poultry husbandry and bee culture. Izv. Sib. otd. AN SSSR no. 11:123-128 '62. (MIRA 17:9)

1. Dal'nevostochnyy filial Sibirskogo otdeleniya AN SSSR, Vladivostok.

FEDOROV, B.V., kand.tekhn.nauk

New technological process for the pressing-off and press-fitting of joints. [Trudy] Ish.mekh.inst. no.2:100-112 '59. (MIRA 13:10)
(Machine-shop practice)

FEDOROV, B. V.,

"Utilization of Mineralized Waters for Irrigation," Pedology, No. 3, 1947

25044. FEDOROV, B. V. O Metode Agromeliorativnogo Rayonirovaniya Territorii. Trudy Yubileynoy Sessii, Posvyashch. Stoletiyv So Dnya Rozhdenya Dokuchayeva. M.-L., 1949, S. 529-34. — Bibliogr: S. 534.

SO: Letopis' No. 33, 1949

FEDOROV, B. V.

FEDOROV, B. V. - "Agromeliorative Regionalization as a Basis for Establishing an Agrotechnical Complex to Increase Soil Productivity." Sub 28 Mar 52, Soil Inst, Acad Sci USSR. (Dissertation for the Degree of Doctorates of Agricultural Sciences).

SO: Vechernaya Moskva January-December 1952

[redacted], P. V.

Dividing the irrigated part of Central Asia into soil improvement regions Tashkent, Akad. nauk UzSSR, 1953. 148 p.

FEDOROV, B. V.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Fedorov, B. V.	"Agricultural Soil Improvement Regionalization of Irrigation Zones of Central Asia"	Academy of Sciences Uzbek SSR

SO: W-30604, 7 July 1954

FEDOROV, B.V.

Story of the reclamation of the Golodnaya Steppe. Izv.AN Uz.SSSR. Ser.biol.nauk no.1:15-27 '57. (MIRA 13:6)
(GOLODNAYA STEPPE--IRRIGATION)

FELITSIANT, Izrail' Noyevich; FEDOROV, B.V., doktor sel'khoz.nauk, otv.red.; BOYKO, A.N., red.; KRASNOPOL'SKIY, S.A., tekhn. red.

[Studying the laws of capillary motion of water and salt solutions in stratified soils] Opyt izucheniia zakonomernostei kapilliarnogo peredvizheniia vody i rastvorov solei v sloistykh gruntakh. Tashkent, M-vo sel'.khoz. Uzbekskoi SSR, 1961. 108 p. (MIRA 15:7)

(Soil percolation)

181T26

FEDOROV D. A.

USSR/Electricity - Transmission, Power Corona Jan 51

"Calculation of Corona Losses on 400-KV Power Lines," Docent V. A. Venikov, Cand Tech Sci, D. A. Fedorov, Engr, Moscow Power Eng Inst imeni Molotov

"Elektrichestvo" No 1, pp 10-14

Examd problem of detg corona power and energy losses in connection with planning of long super-high voltage power lines. Discussion is requested of method proposed by authors for applying experimentally obtained data to the planned lines, and for detg both av-yearly and max losses along entire line. Submitted 16 Oct 50.

181T26

Name	:	FEDOROV, D. A.
Dissertation	:	Investigating the possibility of capacticance-compensated using synchronous compensators in electric system
Degree	:	Cand Tech Sci
Defended At	:	Min Higher Education USSR, Moscow Order of Lenin Power Inst imeni V. M. Molotov
Publication Date, Place	:	1956, Moscow
Source	:	Knizhnaya Letopis' No 6, 1957

FEDOROV, D.A.

AUTHORS: Venikov, V.A., Doctor of Technical Sciences, 105-9-2/32
Professor, Fedorov, D.A., Candidate of Technical Sciences

TITLE: Concerning the Use of Compensated Synchronous Compensators (K voprosu o primenenii kompensirovannykh sinkhronnykh kompensatorov)

PERIODICAL: Elektrichestvo, 1957, Nr 9, pp. 10-13 (USSR)

ABSTRACT: One of the measures which make the increase of the static stability of long distance circuits possible is the use of synchronous compensators in intermediary substations. The power of synchronous compensators necessary for this purpose can be reduced at the cost of a connection in series of static condensers. The authors show that compensation by capacity can be useful although it is no universal means for the improvement of transmissivity. The authors also show that the basic problem which should be dealt with is not the struggle with self-excitation and -oscillation, which can be removed, but the obtaining of an effective compensation in comparison with the automatic control of a greatly effective excitation and the investigation of the possibilities of an automatic control of excitation in the presence of capacity. A use of compensation through capacity is also not impossible in the case of synchronous compensators in relation to a small power in a system with low voltage.

Card 1/2

VENIKOV, V.A., doktor tekhn.nauk, prof.; FEDOROV, D.A., kand.tekhn.nauk

Using compensated synchronous compensators in electric systems. (MIRA 11:9)
Trudy MEI no.26:59-74 '57.
(Electric power distribution)

FEDOROV, D.A., kand.tekhn.nauk

Effect of the excitation on the nature of asynchronous self-excitation of synchronous machines. Trudy MEI no.26:127-132 '57. (MIRA 11:9)
(Electric machinery, Synchronous)

DOLGINOV, A.I.; FEDOROV, D.A.

Investigating the conditions for self-excitation in typical electric power transmission circuits. Nauch.dokl.vys.shkoly; energ. no.3:45-60 '58. (MIRA 12:1)

1. Rekomendovano kafedroy elektricheskikh setey i sistem Gidro-energeticheskogo instituta.
(Electric networks)

8 (2)

AUTHORS: Venikov, V. A., Doctor of Technical Sciences, Professor, Fedorov, D. A., Candidate of Technical Sciences, Docent SOV/105-59-11-22/32

TITLE: Reply to a Remark Made by Yu. A. Rozovskiy

PERIODICAL: Elektrichestvo, 1959, Nr 11, p 85 (USSR)

ABSTRACT: This is a reply to a remark made by Yu. A. Rozovskiy in Elektrichestvo, 1959, Nr 11, pp 84-85 (present periodical) concerning the paper published by the authors in Elektrichestvo, 1957, Nr 9. In the Moskovskiy energeticheskiy institut (Moscow Institute of Power Engineering) and in the Teploelektroproyekt experiments were made to clarify the advantages and disadvantages of compensated synchronous compensators. Also a special damping system with a higher time constant to suppress self-excitation was investigated. In the aforementioned paper of the two authors this measure is regarded as being more general and simpler and, as was shown experimentally, its efficiency is satisfactory. The complication of the machine construction proposed in Yu. A. Rozovskiy's remark and in his paper (Ref 2) written in collaboration with Ye. A. Marchenko and V. A. Andreyuk solely for the purpose

Card 1/2

of suppressing self-excitation is judged uneconomical. The authors emphasize the advantages of fitting small damping resistors into the stator circuit and they are of opinion that the criticism of experimentally and analytically proved factors is not sufficiently substantiated. According to the authors the positive influence on the stability of the synchronous compensator is obvious, since a machine with lower capacity and increased excitation flux offers better conditions than a machine with increased capacity. Furthermore it is said that in heavy breakdowns compensation does not improve dynamic stability. The authors are also of opinion that the compensated synchronous compensators exhibit essential drawbacks and that before they are used a technical and economic comparison should be made with other constructions of the same type. There are 6 Soviet references.

ANISIMOVA, N.D.; VENIKOV, V.A., prof., doktor tekhn.nauk, laureat Leninskoy premii; YEZHKOV, V.V.; ZHUKOV, L.A.; NADEZHDIN, S.V.; ROZANOV, M.N.; FEDOROV, D.A.; TSOV'YANOV, A.N.; LARIONOV, G.Ye., tekhn.red.

[Examples and illustrations of transient processes in electrical systems] Perekhodnye protsessy elektricheskikh sistem v primerakh i illiustratsiiakh. By N.D.Anisimov i dr. Moskva, Gos. energ.izd-vo, 1962. 383 p. (MIRA 15:4)

1. Kafedra "Elektricheskiye sistemy" Moskovskogo energeticheskogo instituta (for all except Lationov). 2. Zaveduyushchiy kafedroy "Elektricheskiye sistemy" Moskovskogo energeticheskogo instituta (for Venikov).
(Transients (Electricity)) (Electric networks)

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9,7100

S/103/62/023/005/006/011
D407/D301

AUTHOR: Fedorov, D.A. (Moscow)

TITLE: Effect of extrapolators on the characteristic of a linear digital automatic system

PERIODICAL: Avtomatika i telemekhanika, v. 23, no. 5, 1962, 602 - 609

4

TEXT: Linear digital automatic systems containing extrapolating devices, are considered. Usually, converters of i-th order serve as extrapolators. The block diagram of a linear digital system with a converter is shown. It incorporates the discrete and the continuous elements, the digital computer and the extrapolator. The system is described in terms of Laplace's classical transform, it being considered as a continuous automatic system with regard to the input signal $x_1(t)$. The averaged spectral density of the random output signal is obtained by means of a Fourier transform of the autocorrelation function R_{f_0}. The random signal $x(\bar{t})$ is converted into the nonstationary random signal $x_1(\bar{t})$. As an example, an elementary

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closed-loop sampled-data system with a converter of zero order, is considered. Linear digital systems can be investigated not only by the generally-accepted method of Ya.Z. Tsypkin (Ref. 1: Teoriya impul'snykh sistem (Theory of Sampled-Data Systems). Fizmatgiz, 1960) but also by the methods of analysis of linear continuous systems. Such a combination of computational methods of linear continuous and discrete systems could be useful in investigating complex systems, incorporating continuous and discrete systems, especially digital systems. In Ref. 1 (Op.cit.) the calculation of such mixed systems is based on the description of the continuous elements by means of the discrete Laplace transform. In the present article, an attempt is made to use the classical, continuous, Laplace transform for the discrete elements (in the given case the digital computer and the converter); this constitutes a new approach to discrete systems. The above method of analysis of digital systems reduces to the generally-accepted one, if the argument t in all the time-relationships is replaced by $n + \varepsilon$. An ideal converter is described in an appendix. There are 5 figures and 5 references.

SUBMITTED: November 1, 1961

ANISIMOVA, N.D., kand.tekhn.nauk, dotsent; VENIKOV, V.A., doktor tekhn.nauk, prof.; DOLGINOV, A.I., doktor tekhn.nauk; FEDOROV, D.A., kand.tekhn.nauk, dotsent

Self-excitation and self-rocking in electrical systems.
Elektrichestvo no.4:11-18 Ap '63. (MIRA 16:5)

1. Moskovskiy energeticheskiy institut.
(Electric power distribution)

ZHUKOV, L.A., kand.tekhn.nauk, dotsent; FEDOROV, D.A., kand.tekhn.nauk, dotsent

Determination of mutual and self-conductances in complex electric power systems. Izv. vys. ucheb. zav.; energ. 6 no.3:14-21 Mr '63. (MIRA 16:5)

1. Moskovskiy ordena Lenina energeticheskiy institut. Predstavlena kafedroy elektricheskikh sistem.
(Electric networks)

ZHUKOV, L.A., kand. tekhn. nauk, dotsent; FEDOROV, D.A., kand. tekhn. nauk, dotsent; LAUGERBAKH, E., inzh.; MARYUTIN, V.A., inzh.

Study of the effect of automatic excitation control on the e.m.f. of generators operating in a steady asynchronous mode in a simple electrical system. Elektrichestvo no.10:38-42 O '64.
(MIRA 17:12)

1. Moskovskiy energeticheskiy institut.

FEDOROV, V.A.

Determination of the power and currents of asynchronously operating synchronous generators in a complex electric power system. Trudy MEI no.54:361-376 '64. (MIRA 17:12)

ZHUKOV, L.A., kand. tekhn. nauk, dotsent (Moskva); FEDOROV, D.A., kand. tekhn. nauk, dotsent (Moskva)

Representation of synchronously operating generators in the equivalent circuits of electrical systems with approximate determination of the parameters of asynchronous modes of operation. Elektrichestvo no.7:1-7 Jl '64. (MIRA 17:11)

ROTSHTEYN, G.A.; FEDOROV, D.D., prof., otv.red.; SNEZHNEVSKIY, A.V., prof., red.

[Hypochondriac schizephrenia] Ipokhondricheskaia shizofreniia. Pod red. A.V.Snezhnevskogo. Moskva, Gos.nauchno-issl.in-t psikhiatrii MZ RSFSR, 1961. 136 p. (MIRA 15:4)

1. Direktor Instituta psikhiatrii Ministerstva zdravookhraneniya RSFSR (for Fedorov). 2. Chlen-korrespondent AMN SSSR (for Snezhnevskiy).
(HYPOCHONDRIA) (SCHIZOPHRENIA)

Fedorov DF

KISLITSYN, S.I.; SHIRKOV, I.P.; VENGEROVSKIY, V.A.; FEDOROV, D.F.; VAZHNOV, B.N.; TRUNTSEV, D.S.

Rostrum of periodical's readers, inventors, efficiency promoters, and innovators at readers' conference in Moscow. Izobr. v SSSR 2 no.9:37 S '57. (MIRA 10:10)

1.Deputat Verkhovnogo Soveta SSSR (for Shirkov). 2.Zavod "Serp i molot" (for Fedorov, Truntsev) 3.Byuro sodeystviya ratsionalizatsii i izobretatel'stvu Nauchno-issledovatel'skogo instituta Drevmash (for Vazhnov).

(Moscow--Inventions)
(Moscow--Suggestion systems)

FELDMAN, D. F., LATYREVA, A. A. and KOCHERYAN, O. N.

Inst. Microbiology and Epidemiology, Rostov-Na-Dony, (-1944-).

"The Dry Vaccine BCG,"

Zhur. Mikrobiol., Epidemiol., i Immunobiol., No. 10-11, 1944

FEDOROV, D.

Our potentials. Den.i kred. 18 no.7:64-65 Jl '60.
(MIRA 13:7)

1. Glavnyy bukhgalter Uryupinskogo otdeleniya Gosbanka Stalingradskoy oblasti.
(Urypinsk--Banks and banking--Accounting)
(Urypinsk--Machine accounting)

FEDOROV, D.I.; SHUBIN, M.A.; NEDOREZOV, I.A.; MASHKOVICH, O.N.; LUR'YE, G.K.

Basis for the prospective typification of earthmoving machines in the construction of transportation systems. Transp. stroi. 15 no.9:43-45 S '65. (MIRA 18:11)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut transportnogo stroitel'stva.

FEDORO/, D. I. Cand Tech Sci

Dissertation: "Relation among speeds, stresses and capacity of the basic mechanisms of a Single Bucket Excavation."

14/2/50

Moscow Order of the Labor Red Banner Engineering Construction Inst imeni V. V. Kuybyshev.

SO Vecheryaya Moskva
Sum 71

FEDOROV, Dmitriy Ivanovich, kandidat tekhnicheskikh nauk; KARAMYSHEV, I.A., redaktor; VERINA, G.P., tekhnicheskiy redaktor

[Excavating under winter conditions; experience in building the Agryz - Pronino - Surgut railroad] Proizvodstvo ekskavatornykh rabot v zimnikh usloviiakh; opyt stroitelei zheleznoi dorogi Agryz - Pronino - Surgut. Moskva, Gos. transp. zhel-dor. izd-vo, 1954. 63 p. (MLRA 8:7)
(Excavation--Cold weather conditions)

FEDOROV, D.I., kandidat tekhnicheskikh nauk.

Advanced use of a dragline excavator and dump truck in combination. Mekh.stroi. 11 no.8:3-7 Ag '54. (MLRA 7:8)
(Excavating machinery) (Dump trucks)

FEDOROV, D.I., kandidat tekhnicheskikh nauk.

Results of testing some earthmoving and transporting machines in sandy soils. Transp.stroi.6 no.10:16-18 O '56. (MLRA 10:1)
(Earthmoving machinery)

FEDOROV, D.I., kand.tekhn.nauk

Testing excavator buckets of a new type. Mekh. stroi. 15 no.11:3-6 N '58. (MIRA 11:12)

(Excavating machinery--Testing)

FEDOROV, D.I., kand.tekhn.nauk

Semicircular drag-line bucket with solid cutting lips. Rats.i izobr.v stroi. no.9:36-39 '59. (MIRA 13:1)

1. Po materialam proyektno-konstruktorskogo byuro Glavstroymekhanizatsii Ministerstva transportnogo stroitel'stva SSSR Moskva, ul. 25 Oktyabrya, d.8.
(Excavating machinery)

DOMBROVSKIY, N.G., doktor tekhn.nauk; FEDOROV, D.I., kand.tekhn.nauk

New designs of excavator dippers. Stroi. i dor. mashinostr. 5 no.10:3-9 O '60. (MIRA 13:10)
(Excavating machinery)

FEDOROV, D.I., kand.tekhn.nauk; TIMASHKOV, M.V., inzh.; NEDOREZOV, I.A., inzh.

Testing experimental straight shovel dippers designed by the Central Communication Scientific Research Institute. Transp. stroi. 10 no.2:38-40 F '60. (MIRA 13:5)
(Excavating machinery--Equipment and supplies)

FEDOROV, D.I., kand.tekhn.nauk; KRUTIKOV, V.I., inzh., red.; KHITROVA, N.A., tekhn.red.

[Investigating the cutting of soil and testing drag-line excavator buckets of a new shape] Issledovaniia rezaniia gruntov i ispytaniia kovshei draglaina novoi formy. Moskva, Vses.izd-vo poligr.ob"edinenie M-va putei soob., 1961. 55 p. (Babushkin. Vsesoiuznyi nauchno-issledovatel'skii institut transportnogo stroitel'stva. Trudy, no.41) (MIRA 14:9)
(Railroads--Earthwork) (Excavating machinery)

FEDOROV, D.I., kand.tekhn.nauk; NEDOREZOV, I.A., kand.tekhn.nauk; PLESHKOV, D.I., kand.tekhn.nauk; TARASOV, S.M., inzh.; SOKOLOVSKIY, S.V., inzh.

Which scraper is better. Stroi. i dor. mash. 6 no.6:13-17 Je '61. (MIRA 14:7)

(Scrapers)

FEDOROV, D.I., kand.tekhn.nauk; MASHKOVICH, O.N., inzh.

Introduce continuous-action earth-working machinery into construction for the transportation industry. Transp. stroi. 12 no.5:12-16 My '62. (MIRA 15:6)
(Excavating machinery)

NEDOREZOV, I.A., kand.tekhn.nauk; FEDOROV, D.I., kand.tekhn.nauk

Elevating graders and scraper planes. Transp.stroi. 12 no.7: 29-33 Jl '62. (MIRA 16:2)
(Earthmoving machinery)

FEDOROV, D. I., kand. tekhn. nauk

Results of experimental studies on cutting soil. Sbor. trud. MISI no.39:85-100 '61. (MIRA 16:4)

1. TSentral'nyy nauchno-issledovatel'skiy institut transportnogo stroitel'stva.

(Earthmoving machinery)

ALEKSEYEVA, T.V., kand. tekhn. nauk; ARTEM'YEV, K.A., kand. tekhn. nauk; BROMBERG, A.A., prof.; VOYTSEKHOVSKIY, R.I., inzh.; UL'YANOV, N.A., kand. tekhn. nauk; Prinimal uchastiye KONONENKO, M.A., inzh.; FEDOROV, D.I., kand. tekhn. nauk, retsenzent.

[Machines for earthwork; theory and calculation] Mashiny dlia zemlianykh rabot; teoriia i raschet. [By] T.V. Alekseeva i dr. Izd.2., perer. i dop. Moskva, Izd-vo "Mashinostroenie," 1964. 467 p. (MIRA 17:5)

PANKRATOV, S.A., doktor tekhn. nauk; SOLDATKIN, Ye.P., kand. tekhn. nauk; FEDOROV, D.I., kand. tekhn. nauk

Determining the tangential constituent forces in excavation activating the working elements of rotary excavators. Stroi. i dor. mash. 9 no.9:4-6 S '64.

(MIRA 17:11)

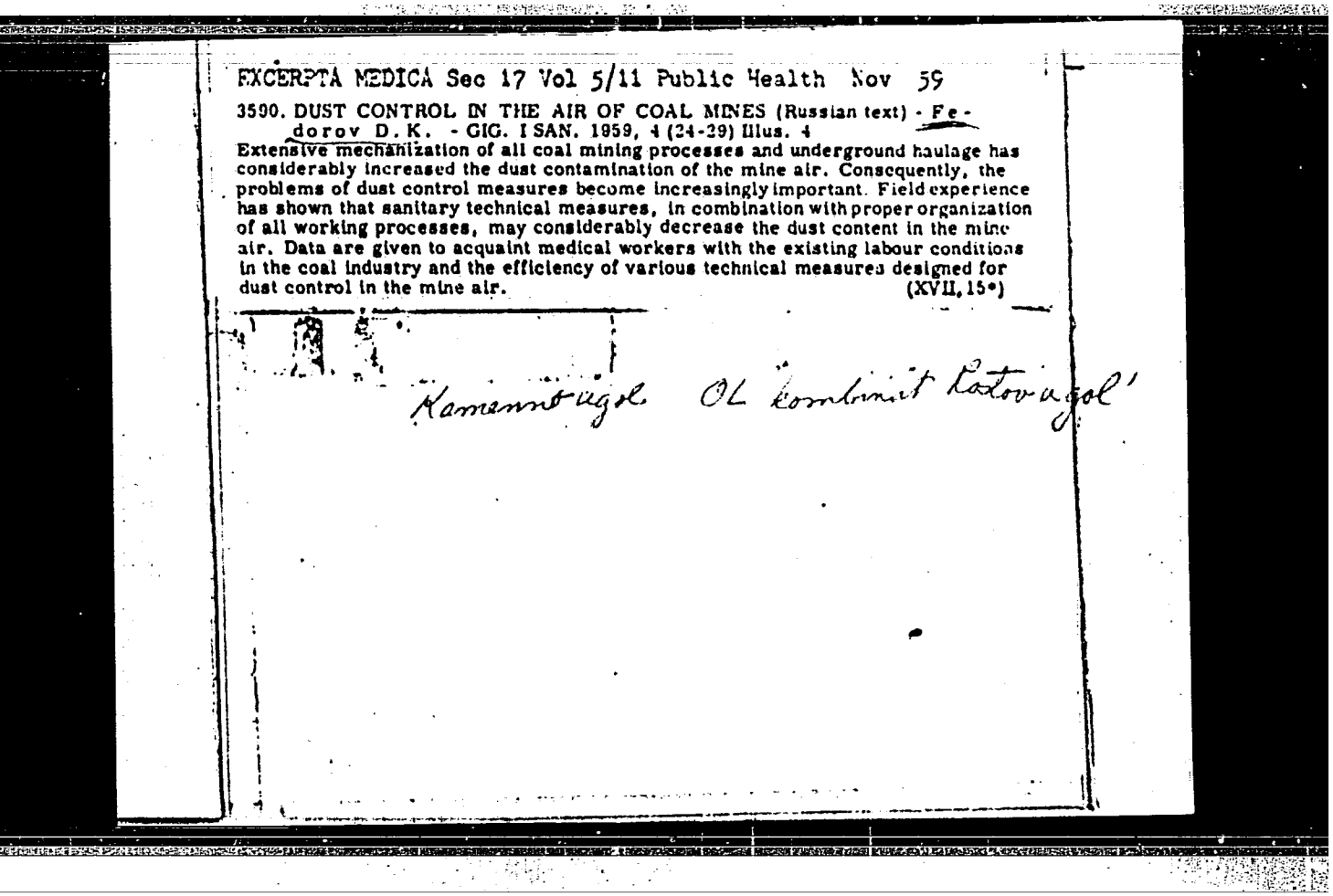
FEDOROV, D.I.; NEDOREZOV, I.A.

Possibility of increasing the efficiency of excavating machines in strip mining. Fiz.-tekh. probl. razrab. pol. iskop. no.1: 46-52 '65. (MIRA 18:10)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut transportnogo stroitel'stva Gosudarstvennogo proizvodstvennogo komiteta po transportnomu stroitel'stvu SSSR, Moskva.

FEDOROV, D.Y., kand. tekhn. nauk; BONDAROVICH, B.A., inzh.

Examination of the working conditions of an earthmoving machine. Stroi. i dor. mash. 10 no.8:3-4 Ag '65. (MIRA 18:9)



EXCERPTA MEDICA Sec 17 Vol 5/11 Public Health Nov 59

3590. DUST CONTROL IN THE AIR OF COAL MINES (Russian text) - Fedorov D. K. - GIG. I SAN. 1959, 4 (24-29) Illus. 4

Extensive mechanization of all coal mining processes and underground haulage has considerably increased the dust contamination of the mine air. Consequently, the problems of dust control measures become increasingly important. Field experience has shown that sanitary technical measures, in combination with proper organization of all working processes, may considerably decrease the dust content in the mine air. Data are given to acquaint medical workers with the existing labour conditions in the coal industry and the efficiency of various technical measures designed for dust control in the mine air. (XVII, 15*)

Kamennougol. OL kombinat Kadiyevugol'

FEDOROV, D.L.

Evaluating the prospects for finding gas and oil in the north-eastern outskirts of the Donets Basin. Razved. i okh. nedr. 30 no.6:9-13 Je '64. (MIRA 17:10)

1. Volgo-Donskoye geologicheskoye upravleniye.

BOBUKH, V.A.; FEDOROV, D.L.

New gas condensate fields on the southern slope of Karpinsk swell. Gaz. prom. 9 no.12:4-7 '64. (MIRA 18:3)

KHOLODKOV, Yu.I.; FEDOROV, D.L.

Estimating hypothetical oil and gas reserves by the volumetric-genetic method. Izv. vys. ucheb. zav.; neft' i gaz 8 no.6:22-24 '65.
(MIRA 18:7)

1. Rostovskiy gosudarstvennyy universitet i Volgo-Donskoye geologicheskoye upravleniye.

1. FEDOROV, D.M.

2. USSR (600)

4. Electric Cables

7. Dry separation of measuring cables with the use of perchloratevynil enamel PKhV-26 Rab.energ. 3 no. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

USSR/Medicine - Scientists Jun 48
Medicine - Surgery

"Anton Martynovich Zabludovskiy," D. N. Fedorov, G. Ya. Iosset, 3 pp

"Vest Khirurgii" Vol LXVIII, No 6

Zabludovskiy was born in Minsk in 1881. After completing studies at Moscow U, he became an extern at the University Clinic. Received doctor's degree in 1911. He has published some 90 works, including several books on surgical methods. Since 1928, he has directed the Chair and Clinic of Gen Surg, First Leningrad Med Inst. He became

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USSR/Medicine - Scientists (Contd) Jun 48

a member of VKP(b) in 1932 and was given the title "Honored Worker in Science" in 1947.

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FEDOROV, D. N.

FEDOROV, D. N. DOCENT

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USSR/Medicine - Scientists
Medicine - Surgery

Jan 49

"Professor A. M. Zabludovskiy," Docent D. N. Fedorov, G. Ya. Iosset, 2 pp

"Khirurgiya" No 1

A. M. Zabludovskiy has headed the Chair and Clinic of Gen Surg at First Leningrad Med Inst since 1928. During World War II, he was chief surgeon of the Adm of Evacuation Hospitals of the VTsSPS of the Tatar and Udmurt republics. He has performed more than 22,000 operations, published 186 scientific works, and trained 9,000 students.

56/49T79

FEDOROV, D.N.

LAVROV, V.V.; ARKHANGEL'SKAYA-LEVINA, M.S.; FEDOROV, D.N.; IOSSET, G.Ya.; SOSNYAKOV, N.G.; BERINGER, Yu.V.; KOZACHINSKIY, R.M.; YELETSKAYA, O.I.; GOSHKINA, A.I.; MIKLASHEVSKAYA, A.V.; ZYKOV, A.A.; LEBEDEV, M.F.; LERGUNOVA, K.S.; RYTSK, Z.A.; FRENKINA, D.Z.; TSIVIN, S.S.

In memory of A.M.Zabludovskii. Khirurgiia no.12:74-75 D '53.
(MLRA 7:1)

(Zabludovskii, Anton Martynovich, 1880-1953)

1. FEDOROV, D. N.

2. USSR (600)

4. Antiseptics - Therapeutic Use

7. Novocaine block and oil balsam antiseptics as a special type of therapy of pathogenesis. A. V. Vishnevskiy, A. A. Vishnevskiy. Reviewed by D. N. Fedorov. Vest. khir. 73, no. 1, 1953.

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

FEDOROV D.N.

KOLESOV, V.I., professor; FEDOROV, D.N.; IOSSET, G.Ya.

Anton Martynovich Zabludovskii; first anniversary of his death.
Vest. khir. 74 no.5:94-96 Jl-Ag '54. (MLRA 7:10)
(ZABLUDOVSKII, ANTON MARTYNOVICH, 1880-1953)

FEDOROV, D.N., dotsent

Conference of Pskov Province Surgeons. Vest.khir.76 no.7:158 Ag '55. (MLRA 8:10)
(SURGERY)

GARVIN, L.I., dotsent (Leningrad, Makhovaya ul., d.14, kv.15) REYMERS, Ye.K.; FEDOROV, D.N., dotsent

Experience in treating patients with acute pancreatitis. Vest.khir. 77 no.10:42-49 O '56. (MLRA 9:12)

1. Iz Leningradskogo nauchno-issledovatel'skogo instituta skoroy pomoshchi im. Yu.Yu. Dzhanilidze (dir. - dotsent D.N.Fedorov)
(PANCREATITIS
diag. & ther.)

FEDOROV, D.N.; KOVALENKO, T.V.

Semiautomatic line for the heat treatment of the semiaxles of combines. Biul. tekh.-ekon. inform. Gos. nauch.-issl. inst. nauch. i tekh. inform. 18 no.2:31-32 F '65.
(MIRA 18:5)

29553
S/106/61/000/011/005/006
A055/A127

9,2520 (1139, 1159, 1161)

AUTHORS: Fedorov, D. P. and Shchevelev, M. I.

TITLE: Broadband correction of the input admittance of a transistor.

PERIODICAL: Elektrosvyaz', no. 11, 1961, 35 - 40

TEXT: The authors analyze the effect of the frequency-dependence of the transistor input admittance on the frequency response of a multi-stage amplifier. A simple correction method is given, permitting to render the input admittance active and constant within a wide frequency band. The complex transfer constant of the multi-stage amplifier (Figure 1) is:

$$\overset{*}{K} = \frac{\overset{*}{U}_2}{\overset{*}{U}_1} = \overset{*}{K}_{inp} \prod_{i=1}^{n} \overset{*}{K}_i \qquad (1)$$

In this formula, $\overset{*}{K}_{inp} = \overset{*}{U}_{inp\ 1} / \overset{*}{U}_1$ is:

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Broadband correction of the input ....

$$\overset{*}{K}_{inp} = \frac{1}{1 + \overset{*}{Z}_{gen}\,\overset{*}{Y}_{inp\ 1}} \qquad (2)$$

and $\overset{*}{K}_i$ (voltage amplification factor of the i-th stage) is:

$$\overset{*}{K}_i = \frac{\overset{*}{Y}_{21i}}{\overset{*}{Y}_{22i} + \overset{*}{Y}_{load\ i}} \qquad (3)$$

$\overset{*}{Y}_{load\ i}$ being the admittance of the load of the i-th stage. For all stages, save the n-th $\overset{*}{Y}_{load\ i} = \overset{*}{Y}_{inp\ (i+1)}$. On the other hand:

$$\overset{*}{Y}_{inp\ i} = \overset{*}{Y}_{11i} - \overset{*}{Y}_{12i}\,\frac{\overset{*}{Y}_{21i}}{\overset{*}{Y}_{22i} + \overset{*}{Y}_{load\ i}} = \overset{*}{Y}_{11i} + \overset{*}{Y}_{12i}\,\overset{*}{K}_i \qquad (4)$$

In the case of the examined amplifier, K_i is small; therefore, it can be assumed,

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Broadband correction of the input ...

as a first approximation, that:

$$\overset{*}{Y}_{\text{inp i}} = \overset{*}{Y}_{11i} \qquad (5)$$

The frequency-dependence of Y_{11i} in the common-emitter arrangement is presented in Figure 2. The elements of this circuit can be considered as frequency-independent up to frequencies approaching ω_α (limit frequency of current amplification in the common-base arrangement). In this circuit, r_b is the effective base resistance,

$$r_{11} = \frac{1}{g_{em}(1 - \alpha_0)} \quad \text{and} \quad C_{11} = \frac{1.2\, g_{em}}{\omega_\alpha}.$$

α_0 is here the current amplification in the common-base arrangement at low frequencies; $g_{em} = I_{em\,0} \frac{e}{kT}$ is the diffusion conductance of the emitter; $I_{em\,0}$ is the direct component of the emitter current; e is the electron charge; k is the Boltzmann constant; T is the absolute temperature. It follows from the circuit of Figure 2 that:

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Broadband correction of the input ....

$$\overset{*}{Y}_{11} = \frac{1}{r_b + r_{11}} \frac{1 + i\omega\tau_{11}}{1 + i\omega\tau_0} \qquad (6)$$

where $\tau_{11} = r_{11} C_{11}$; $\tau_0 = \tau_{11} \frac{r_b}{r_{11} + r_b}$

Substituting (6) in (2) and assuming that $Z_{gen} = R_{gen}$, we obtain:

$$K_{inp} = K_{inp\ 0} \frac{1 + i\eta}{1 + i\eta[1 + l(1 - a)]} \qquad (7)$$

where $\eta = \omega\tau_0$; $a = \tau_0/\tau_{11} = \frac{r_b}{r_{11} + r_b}$; $l = \frac{R_{gen}}{a(R_{gen} + r_{11} + r_b)}$.

At low frequencies: $\overset{*}{K}_{inp} = K_{inp\ 0} = \frac{r_{11} + r_b}{R_{gen} + r_{11} + r_b}$. If $R_{gen} \ll r_b + r_{11}$, $K_{inp\ o} \rightarrow 1$

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Broadband correction of the input ....

and ceases to depend on frequency. If $R_{gen} \gg r_b + r_{11}$, a simple formula can be derived vom Eq. (7), determining the upper limit frequency of $\overset{*}{K}_{inp}$. This formula is:

$$\omega_{lim} = \frac{1 + \frac{r_{11} + r_b}{R_{gen}}}{\tau_{11}} \qquad (8)$$

It shows that, at $R_{gen} \gg r_{11} + r_b$, the limit frequency is determined by the in--put-circuit time-constant τ_{11}:

$$\omega'_{lim} = \frac{1}{\tau_n} = \frac{\omega_a (1 - \alpha_0)}{1.2} \qquad (9)$$

A graph shows that, when R_{gen} decreases, the increase of the limit frequency is insignificant. The conclusion is that the limit frequency of the amplifier with common-emitter arrangement exceeds but slightly the upper limit of the sound

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range. The use of a simple parallel inductive correction permits, however, to improve substantially the frequency-dependence of the input admittance. Figure 4 is the equivalent circuit of the i n p u t admittance and of the correcting two--terminal network. The equivalent admittance is:

$$\overset{*}{Y}_{eq} = \overset{*}{Y}_{11} + \overset{*}{Y}_{cor} = \frac{1}{r_b + r_{11}} \frac{1 + i\omega\tau_{11}}{1 + i\omega\tau_0} + \frac{1}{R(1 + i\omega\tau_{cor})} \qquad (10)$$

where $\tau_{cor} = L/R$ is the time-constant of the correcting circuit. From (10) we obtain:

$$\frac{\overset{*}{Y}_{eq}}{Y_{eq\ 0}} = \frac{1 - \eta^2 kl + i\eta[1 + 1 + al(k - 1)]}{1 - \eta^2 k + i\eta(k + 1)} \qquad (11)$$

where $Y_{eq\ 0} = \frac{1}{r_b + r_{11}} + \frac{1}{R} = \frac{1}{r_b l}$; $K = \frac{\tau_{cor}}{\tau_0}$ is the correction factor, the other symbols being the same as in (7). The frequency and the phase characteristics of

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Broadband correction of the input ....

the input admittance are given, respectively, by:

$$\frac{Y_{eq}}{Y_{eq\ 0}} = \sqrt{\frac{(1 - \eta^2 kl)^2 + \eta^2 [1 + 1 + al(k - 1)]^2}{(1 - \eta^2 k)^2 + \eta^2 (k + 1)^2}} \qquad (12)$$

$$\varphi = \text{arc tg}\eta \frac{(1 - \eta^2 k)[1 + 1 + al(k - 1)] - (1 - \eta^2 kl)(k + 1)}{(1 - \eta^2 k)(1 - \eta^2 kl) + \eta^2 [1 + 1 + al(k - 1)](k + 1)} \qquad (13)$$

It follows from (12) and (13) that, when:

$$K = K_0 = 1 \quad \text{and} \quad l = l_0 = 1, \qquad Y_{eq} = Y_{eq\ 0} \quad \text{and} \quad \varphi = 0 \qquad (14)$$

This means that the input admittance is active and frequency-independent. Correction according to conditions (14) has, however, the following drawback: the equivalent input admittance proves large, which considerably reduces the amplification of

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Broadband correction of the input ....

the preceding stage. The input admittance is reduced when $l > l_0$, but it ceases then to be purely active. The "Braude" criterion makes it possible to find the condition ensuring the optimum frequency characteristic of the input admittance:

$$[1 + l + al(K_{opt} - 1)]^2 = K_{opt}^2 + 2K_{opt}l + 1 \qquad (17)$$

From formula (17) the optimum correction parameter is derived:

$$K_{opt} = \frac{\sqrt{\frac{2l(1 + l)(1 - a)}{1 - al}} - l(1 - a)}{1 + al} \qquad (18)$$

The dependence of the limit frequency of the optimum frequency characteristic on the parameter l is given by the following expression:

$$\eta_{lim\ opt} = \sqrt{\frac{K_{opt}^2 - 1}{2K_{opt}^2(l^2 - 2)}\left[1 + \sqrt{1 + \frac{4K_{opt}^2(l^2 - 2)}{(K_{opt}^2 + 1)^2}}\right]} \qquad (19)$$

When $l \leq \sqrt{2}$, the input admittance remains practically constant (as shown by a

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29553

Broadband correction of the input S/106/61/000/011/005/006
A055/A127

graph) within a wide frequency band. An experimental check of the results obtained with the above set of formulae is given at the end of the article. The experimental data coincide, with sufficient accuracy, with the theoretically obtained results. There are 7 figures, 3 Soviet-bloc and 2 non-Soviet-bloc references. The references to the English-language publications read as follows: Zavels. Physical theory of new circuit representation for junction transistors. "Journ. Appl. Phys.", 1954, v. 25, No. 8; Pritchard. Frequency variations of junction transistors parameters. "Proc. IRE.", 1954, v. 42, No. 5.

SUBMITTED: March 23, 1961.

[Abstracter's note: The following subscripts are translated in formulae and text: gen (generator) stands for г ; inp stands for вх ; load stands for н ; b (base) stands for б ; em (emitter) stands for э ; eq (equivalent) stands for э ; lim (limit) stands for пр ; opt (optimum) stands for опт ; cor (correction) stands for к .

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S/106/62/000/005/007/007
A055/A101

AUTHORS: Fedorov, D.P.; Shchevelev, M.I.

TITLE: On the approximate phase-frequency and transient characteristics of the current transmission coefficient of the junction transistor

PERIODICAL: Elektrosvyaz, no. 5, 1962, 72 - 74

TEXT: The current transmission coefficient (at short-circuit in the common base arrangement) is:

$$\alpha = \gamma \operatorname{sech} \frac{W_0}{L_p} \sqrt{1 + i\omega\tau_p}, \qquad (1)$$

where γ is the emitter efficiency, W_0 the width of the base region, L_p the diffusion length of the holes in the base region (in p-n-p transistors), τ_p the life-time of the holes, ω the angular frequency. This formula is, however, too complicated for calculations and leads to cumbersome expressions for the transient characteristic $\alpha(t)$. Several approximate expressions have been suggested, therefore, for the phase-frequency and transient characteristics of α. The author suggests an approximation rather similar to that put forward by T.M. Aga-

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khanyan (Radiotekhnika, 1958, v. 13, no. 2). Referring to the work of Ya.A. Kamenetskiy [Ekivalentnyye skhemy kristallicheskikh triodov, "Poluprovodnikovyye pribory i ikh primeneniya" (Crystal triode equivalent circuits, "Semiconductor devices and their applications"), Collection of articles edited by Ya.A. Fedorov, Izd. "Sov. Radio", 1957, no. 2], the author writes:

$$\alpha = \frac{\alpha_0}{(1 + i\eta\omega_\alpha T)(1 + i\eta m \omega_\alpha T)}, \qquad (4)$$

where $\eta = \omega/\omega_\alpha$, $\alpha_0 = \gamma \operatorname{sech} \frac{W_0}{L_p}$ and m and T are coefficients chosen from the coincidence condition of the modulus and phase of (1) and (4) on the limit frequency ω_α. The functions $m = f_1(\alpha_0)$ and $\omega_\alpha T = f_2(\alpha_0)$ are represented graphically. The comparative analysis of the various graphs showing the phase-frequency characteristics calculated according to formulae (1), (4) and to the Agakhanyan formula leads the author to the conclusion that, for technical calculations, it is altogether possible to use the averaged values m_{aver} and $\omega_\alpha T_{aver}$. Replacing in (4) $i\omega$ by the complex operator p, the author obtains

On the approximate phase-frequency and ....

the following expression (in operator form) for the transient characteristic:

$$\alpha(p) = \frac{\alpha_0}{(1 + pT)(1 + pmT)} . \qquad (6)$$

To this expression corresponds the following integrated transient characteristic:

$$\frac{\alpha(t)}{\alpha_0} = 1 - \frac{1}{1 - m} e^{-\frac{\theta}{\omega_\alpha T}} + \frac{m}{1 - m} e^{-\frac{\theta}{\omega_\alpha mT}} , \qquad (7)$$

where $\theta = \omega_\alpha t$. The Soviet personalities mentioned in the article are: E.I. Adirovich, V.G. Kolotilova, and A.A. Grinberg. There are 4 figures.

SUBMITTED: June 10, 1961

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KUZNETSOV, V.I.; FEDOROV, D.P.; SHCHEVELEV, M.I.

Leakage and instability of germanium junction transistors. Izv. vys.ucheb.zav.; fiz. no.3:27-31 '63. (MIRA 16:12)

1. Voronezhskiy politekhnicheskiy institut.

L 01295-66 EWT(m)/EWP(t)/EWP(b) IJP(c) JD/GS

ACCESSION NR: AT5020463 UR/0000/64/000/000/0177/0184

AUTHOR: Fadorov, D. P.; Shchevelev, M. I.; Kuznetsov, V. I.

TITLE: Effect of leakage on the stability of germanium transistor parameters

SOURCE: Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya po fizike poluprovodnikov (poverkhnostnyye i kontaktnyye yavleniya). Tomsk, 1962. Poverkhnostnyye i kontaktnyye yavleniya v poluprovodnikakh (Surface and contact phenomena in semiconductors). Tomsk, Izd-vo Tomskogo univ., 1964, 177-184

TOPIC TAGS: collector emitter junction, germanium transistor/ P4 germanium transistor

ABSTRACT: The authors study the effect of leakage in the collector junction on the stability of the collector current and the amplification factor in P4A-P4D germanium alloyed-junction transistors. The studies showed that the form of the current-voltage curve for the collector junction depends on the nature of the function $I_{leak}(V_{col})$ (see fig. 1 of the Enclosure). Investigation of the nature of collector current instability in type P4 transistors showed various forms of changes in the collector current with a definite collector voltage at room temperature. In one

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group of transistors, only a reduction in current was observed (negative current creep), in another--only an increase (positive current creep). In a third group of transistors, the collector current first decreased and then increased. The ratio between the two sections of the curve which correspond to negative and positive creep varies with the voltage on the collector. All samples aged in a humid atmosphere have a positive collector current creep. In the overwhelming majority of transistors which have a positive current creep at room temperature, there is a reversal in this creep when the temperature is reduced to -20°C. A transition from positive creep to negative is also observed after the specimens are dried in vacuum at 100°C for 5 hours. There is a transition from negative to positive creep when the temperature is increased. However, there were specimens which kept their negative current creep up to temperatures of 60°C. The various types of instability in the reverse currents of these *p-n-p* germanium transistors is attributed to differences in the adsorption of water vapor on the germanium surface. Orig. art. has: 4 figures, 5 formulas

ASSOCIATION: Voronezhskiy politekhnicheskiy institut (Voronezh Polytechnic Institute)

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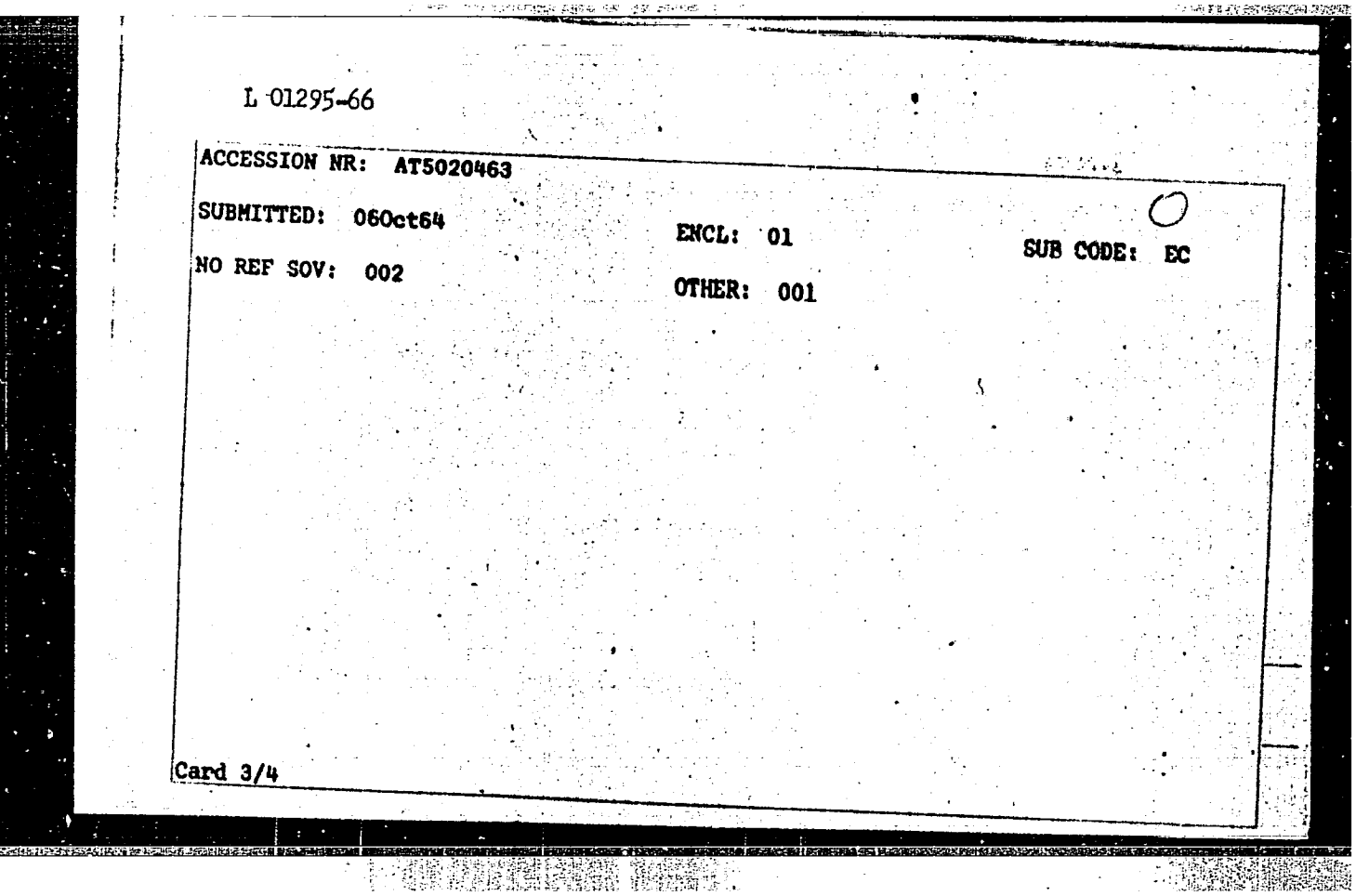

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SUBMITTED: 060ct64 ENCL: 01 SUB CODE: EC

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ACCESSION NR: AT5020463

ENCLOSURE: 01

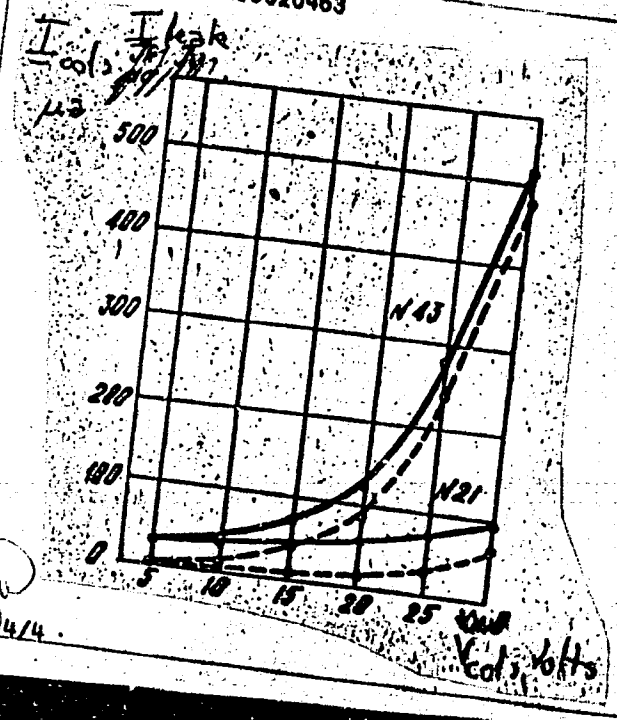

Fig. 1. Collector voltage as a function of leakage current

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